1: Jenness--59-60 (1913-16) 1922 Copper Eskimo
116, 333, 342

"The first step (2) in constructing a snow-hut is to find a suitable site. Not only must the snow be deep enough but it must also possess a certain firmness. It must not be crumbly, as it is when granular, or soft as when freshly fallen, otherwise the blocks will fall to pieces at the slightest touch; as for its depth, that should be at least a foot. There are two ways of cutting snow-blocks, horizontally and vertically, and it depends on the depth of snow which one the native will employ. In the former method a rectangle is cut to the size required and the block is undercut for as far as the knife will reach. A kick below will now release it, and slightly raise one side so that it can be lifted in the hands. Sometimes careful pressure with the foot on top will break it off where a kick beneath would crack it. The depth at which the undercut is made decides the thickness of the block. This is the only method possible when the snow is shallow. Vertical cutting requires deep snow, for here it is the width of the block that is regulated by the depth. A few rapid cuts with the knife, a few vigorous kicks to scatter the loose snow, and a space is cleared from which the first block can be cut away. A cut on each side gives it its length, and the knife is run backwards and forwards underneath to give the width of the block. One face and the sides are now clear, and all that remains

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"2. Cf. Stefansson's account in Anthrop. Papers, A.M.N.H., Vol. XIV, pt. I, p. 6 et seq., and Amundsen, Vol. II, ch. VIII.

to be done is to determine its thickness and separate the remaining face. This is the only delicate part of the operation. The first cut must not be deep, otherwise the block will be sure to crack on one side before the knife has reached the other. Usually the man runs his knife along the back face twice, cutting free about half its surface; then he stabs it down about the middle, when the block breaks off as a rule and falls towards him. If this should not release it he stabs it again on the side that he thinks is holding, and sometimes on the other side as well. Once the first block has been extracted the others proceed more easily, since there is more open space in which to work and their shape is already half outlined. Vertical cutting is quicker and easier than cutting horizontally, besides which there is more snow in the same surface area. Then too the deeper down you cut in making your house the less high you have to build. It makes no difference if you come to ice, for a floor of ice is quite as good as one of snow. A deep snow-drift gives you half your wall already built. With a small house almost all the blocks required can be taken from the floor, but should more be needed they can soon be obtained outside and pushed in through an opening cut in the bottom of the wall.

One or sometimes two men therefore build up the house from the inside, while the housewife and the children make an outer rampart all around it about six inches or a foot away, and fill the interspace with soft snow. The arrangement of the first tier of blocks naturally determines the size and shape of the subsequent house. A Mackenzie

native who was building us a hut in [60] which to shelter the dogs made the diameter of his first tier far too great, so that instead of his walls approaching in a perfect Byzantine dome, they mounted skywards almost to a cone. A more skilful workman might have made a symmetrical dome despite the diameter, but the art of building snow-huts is fast dying out amongst the western natives.

The critical stage in the building of a snow hut comes with the second tier, for then the spiral form commences and judgment and experience are required to know at what place to begin. The younger men often seek the advice of their elders; and I have seen even an old woman correct a youth and show him where to begin his coil. Often the spiral form is barely noticeable when the hut is finished, and one has the impression that the blocks are set up anyhow. The neatest workmen make their blocks rectangular, and lay them so that the joints will come in steps, no block falling exactly over the one below. As each is laid in place the knife is run along the joints and the block punched sharply on the top to fit it tightly against its neighbours. Thus the builder follows round his spiral, curving gradually inwards till only a small opening remains above. The final stage is the most critical of all, for the roof will collapse if made too flat, and part of the structure may cave in from an accidental knock, or the unskilful jointing of a block. The joints are therefore bevelled, but even so it is sometimes necessary to hold one block up with the hand till it is wedged securely by the next. The keystone requires skilful handling. It is roughly trimmed to shape, then pushed up through the

opening in the roof and gently lowered from above. The left hand poises it above the hole, while with the right the builder trims its edges and those of the blocks against which it sets.

The structure is now complete, but many chinks and gaps remain where the blocks fit imperfectly together. These must be closed from without, if the housewife has not already done this after making her rampart. Small blocks of hard snow are jammed into the larger gaps, and all the joints are filled with soft snow, which acts like mortar and cements the blocks together. It matters little if a few chinks still remain on top, for the warmth inside the hut sets a current of air flowing upwards and outside; but unless the lower wall is tight the house will be very draughty and uncomfortable. This cannot happen as long as an outer rampart is built all round, but the temporary hut for one night's occupation only has usually no such rampart; instead, soft snow is packed tightly round the base of the lower tier, and into all the joints.

Not every hut is built so carefully. Sometimes the shape is oval, the length much greater than the breadth. Then the side walls are gradually brought together till a row of longer blocks laid across like beams will close the roof. But this is a very slovenly way of building. More often the hut is dome-shaped, but the blocks are entirely unsymmetrical, being set up in any manner so long as they hold together. The spiral form is then quite absent, although the same care is still required in beginning the

second tier. Even the rule that no joint should come directly above the one below is not adhered to, and the joints come anywhere. This in fact is the usual form of hut, and the perfect dome built with symmetrical blocks arranged in a continuous spiral which earlier writers have so consistently depicted is of very rare occurrence. In fact not every native has the necessary skill to make it, besides which it requires more time and labour. But every man can build a snow-hut of some kind or another, and must indeed at the end of each day's journey that he makes in winter. He may have travelled many miles, dragging a heavy sled, and darkness is almost upon him before he begins his hut; naturally, then, he is much too tired to care about its shape so long as it provides his family and himself with a comfortable shelter for the night."

1: Jenness--63 (1913-16) 1922 Copper Eskimo
116, 333, 342

"The Eskimo is very skilful in modifying the shape of his hut to suit his needs. One snow-hut in which I lived was dripping badly, besides which it had an awkward shape, so its owner knocked out the roof and part of one side and built it up afresh. The warmth of the hut had transformed the inner face of each snow-block into ice to the depth of about an inch, so that he had to chop it away with a small hatchet. This transformation of the snow to ice explains the solidity of a snow-hut, which is so great indeed that a full-grown man can stand on the very top of the roof without its collapsing. The same native who had thus re-shaped his dwelling once made a chimney of snow-blocks in a small snow hut when we were trying to cook inside with chips of driftwood. He derived the notion no doubt from the stove pipes at our station, but it showed at least his versatility and his skill in handling snow."

2: Stefansson--230 (1908-12) 1914 Copper Eskimo
333, 342, 117

" Victoria Island.. Snowhouses. Snowhouse building differs here somewhat from the Kittegaryuit who build in a regular spiral from the ground up and cut the snow usually outside the house. Here the snow is probed with a probe about four feet long to see if it is good quality down to the ice and the ice level. Blocks are then cut from the floor of the house first, and so as to have their transverse diameter vertical. The Kittegaryuit are particular about the size of the blocks having them about uniform. These cut blocks any shape and size, some like a "four square" timber and anything from a foot to four feet long, some squares, some triangles, etc. The wall is not started in a spiral, our north wall was well up when someone else started the south wall equally irregularly. When the roof part is in construction the blocks are more regular in shape and of more uniform quality. There was not enough snow in the floor for much more than half the house, a few blocks were spoiled for the snow was not good. The house was about circular and about eight feet to the dome, diameter about ten feet. Outside to a height of about three feet, a second wall is built outside the first, about eighteen inches from it, and soft snow thrown in between. An oval shaped hallway about four feet high was built southwest and just east of it a rectangular shaped door cut about three feet high and two feet wide, through which snow blocks were passed in. When house was finished this was walled up and a new door arch-shaped about two and a half feet high, cut in from entry. The sleeping platform is built of the pieces that break and of new

blocks passed in to front it, with loose snow shoveled over. In our case the platform is about eighteen inches, but I have seen it two and a half feet, in which case it consists of a horseshoe-shaped bench left or built around the wall and boards laid across."

412 Two incidents that came directly under my notice in the summer of 1915
322 were fairly typical. A native with whom I was travelling in southwest Victoria Island discovered on the beach a long, nail-studded plank that had presumably fallen overboard from some vessel. He carried it several miles inland to our camp, and there spent half a day splitting it into poles for fish-spear handles, two of which he sold to a kinsman. A few days later another native found a second plank, which he proposed to convert into a sled-runner, and with this purpose in view trimmed it slightly with his hunting knife. After consulting his companions, however, he decided that a new sled-runner was not needed, so he turned the [239] plank over to his stepfather to fashion into tent-poles. In each case the native split the plank with a crude antler wedge driven home by a boulder.

320 The uses of wood were naturally manifold. From it were made the sled,
[302] the tent-poles, the frame of the kayak, the snow shovel, the table, food trays, and other articles too numerous to mention. Odd chips of wood sometimes served as fuel during the summer months, although the Eskimo preferred
824 heather or willow twigs. Willow twigs had a special use; sewn together in a
513 long strip they provided a mattress to protect the bedskins from the snow.

STONE

• 333 Stone (apart from native copper) played an astonishingly small rôle in the economy of the Copper Eskimo. Their winter home was invariably the snow-
[342] hut, although their predecessors in the region had dwelt in huts of snow or wood, whose ruins could still be traced in numerous places along the coast. Loose stone boulders held down the edges of the Copper Eskimo tents; pillars of stone (in many cases flat slabs of dolomite easily piled one on top of another) supported kayaks, sleds, and other goods that were temporarily abandoned during the summer months; and heaped-up boulders protected caches of meat or clothes from the ravages of foxes, wolves, and birds; but any real construc-
324 tion in stone was conspicuously lacking. There were no stone knives or adzes,
412 no arrow heads tipped with stone, no stone sinkers for fishing lines or nets, and no stone scrapers for use on wood or hides, although implements of all these types had been used by the earlier inhabitants and were sometimes gathered as curiosities by the Copper Eskimo themselves. There were stone hammers and whetstones, it is true, but these were merely unshaped pebbles picked up when
[415] the need arose and afterwards discarded. In short, stone provided the material
[354] for two objects only, the lamp and the cooking pot; and the stone cooking pot
[179] was discarded soon after our visit in favour of iron vessels brought in from the outside.

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Figure 1. Lamp of native copper. IV.D.1441. 1/1.

324 These two vessels, the lamp and the cooking pot, were invariably made from
415 soapstone (talc chlorite schist), originally with copper-bladed adzes, but in our
354 time with adzes of iron. Freshly quarried soapstone readily scratches with the
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[135?]